

# An Introduction to *Genlisea*

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*Genlisea* was discovered in 1833 by Auguste de Sainte-Hilaire in Brazil. It belongs to the family *Lentibulariaceae*, along with *Utricularia*, *Pinguicula*, and *Polypompholyx*. Its range is more extensive than that of most other carnivorous plant genera and includes South America, Africa, Madagascar, and the West Indies. Its trap is unique, most closely resembling that of *Sarracenia psittacina*, but substantially different from even that species. *Genlisea* is, however, probably the least well-known genus of carnivorous plants.

Like *Utricularia*, *Genlisea* is a rootless, aquatic or semi-aquatic herb. This perennial plant grows from a slender, occasionally branching rhizome. There are two leaf types which grow simultaneously: foliage leaves and traps. The foliage leaves are linear or spatulate, and often grow in a dense cluster (less dense in the larger species), forming a hemisphere of leaves.

The traps vary in size (depending on the species) from 2.5 to 15 centimeters in total length. The trap consists of a bulb-shaped cavity atop a long footstalk. From the end of the cavity there is a long cylinder with the trap's mouth at the end.

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to face in creating a unique atmosphere of study and social interaction.

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On each side of the mouth, there is a spiral "arm." The trap is attached to the rhizome by the footstalk, and usually hangs in an inverted position with the arms reaching downward. Copepods, nematodes, water spiders, and other small prey apparently follow the spiral arm to the trap's mouth. Once inside the mouth, long, pointed hairs which line the cylinder prevent the prey from backing out. Eventually the prey makes its way to the bulb, where it is decomposed and its nutrients absorbed.

The scape is simple, slender, erect, and often very tall. There are several to many evenly spaced flowers. The calyx has five parts, but the corolla is bilobed. The lower lip of the flower is large and trilobed, and the spur is incurved.

*Genlisea africana*. This species is found in wet grasslands in much of tropical Africa, including Guinea, Sierra Leone, Angola, Zimbabwe, and the Ivory Coast. It has numerous, spatulate leaves which range from 0.5 to 3 centimeters in length. It has from two to twelve violet (or, rarely, white or yellow) flowers on a scape which may reach 35 centimeters in height. The 0.6 to 0.8 centimeter flowers are densely covered with gland-tipped hairs. The lower lip of the flower is deeply incised, forming three distinct lobes. This species has two subspecies: *Genlisea africana* ssp. *africana* (= *G. subviridis*) and *Genlisea africana* ssp. *stapfii* (= *G. stapfii*).

*Genlisea filiformis* (= *G. luteo-viridis* or *G. anfractuosa*). This small species is found in swampy areas of Brazil, Venezuela, Guyana, Cuba, Colombia, Guatemala, and Belize. There are few to many spatulate foliage leaves in a rosette. The leaf blades are about three to five millimeters long and rounded at the apex. The leaf stalk is about as long or somewhat longer than the leaf blade. Two to four greenish-yellow or yellow flowers are found on a wiry scape which may be up to 20 centimeters

tall. The spur is rounded and extends below the lower lip of the flower. The pedicel is covered with long, gland-tipped hairs.

*Genlisea glabra*. This species is found in swampy areas of Venezuela. The narrowly spatulate leaves form a dense rosette. The leaves are one to four centimeters in overall length (including a long leaf stalk), and about 1.2 millimeters wide at their widest point. There are two to four flowers atop an erect scape which is about 18 centimeters in height. The lilac flower is about seven millimeters long, and has a deep purple ring along the edge of the lower lip. The spur is about as long as the lower lip.

*Genlisea guianensis*. This species is found in wet savannas in Guyana, Brazil, Venezuela, and Belize. It has lanceolate leaves, and violet or purple flowers with a long spur. New plants may sprout from the ends of the leaves.

*Genlisea hispidula*. This species is found in tropical Africa. Its foliage leaves may reach five centimeters in length. There are two to six violet flowers atop a scape which may reach 30 centimeters in height. The lower lip of the flower is slightly incised, forming three lobes. This species has two subspecies: *Genlisea hispidula* ssp. *hispidula* and *Genlisea hispidula* ssp. *subglabra* (= *G. subglabra*). The latter subspecies is found in eastern Africa.

*Genlisea pygmaea* (= *G. exmeraldae*, *G. nigrocaulis*, or *G. oxycetron*). This small species is found in damp savannas in Brazil, Venezuela, Guyana, Colombia, Belize, and Trinidad. The leaves are spatulate. The yellow flowers are densely covered with both short hairs and long, gland-tipped hairs, and they are found on a slender scape which is usually over ten centimeters long. The conical spur extends below the lower lip.

*Genlisea repens* (= *G. pulchella* or *G. pusilla*). The trap of this small species is about three centimeters in total length. The foliage leaves are spatulate with a somewhat long leaf stalk. The flower is yellow, atop a tall scape (usually over ten cen-

timeters tall). The lower lip of the corolla is slightly trilobed. The spur is conical and extends below the lower lip. This species is distinguished from *Genlisea pygmaea* primarily by the lack of (or small number of) hairs on the flower. *Genlisea repens* is found in Brazil, Venezuela, Guyana, and Paraguay.

*Genlisea roraimensis*. This species is found along stream banks in Venezuela. It has spatulate leaves. The yellow flowers are on a thick scape which is less than ten centimeters tall. The flowers are densely covered with short hairs and long, gland-tipped hairs. The spur is no longer than the corolla's lower lip.

*Genlisea sanariapoana*. This species is found in wet, sandy areas of Venezuela. Its leaves are lanceolate. The flowers are violet or purple with a long spur. The lower lip is slightly trilobed, and the scape and calyx of this species are densely covered with gland-tipped hairs.

#### Other species:

*Genlisea angolensis* — Angola, Zaire.

*Genlisea aurea* — (= *G. minor* or *G. ornata*) — a large species from Brazil.

*Genlisea glandulosissima* — Zambia.

*Genlisea margaretae* (= *G. recurva*) — Zambia, Tanzania, Madagascar.

*Genlisea violacea* (= *G. biloba*, *G. cylindrica*, or *G. reflexa*) — Brazil.

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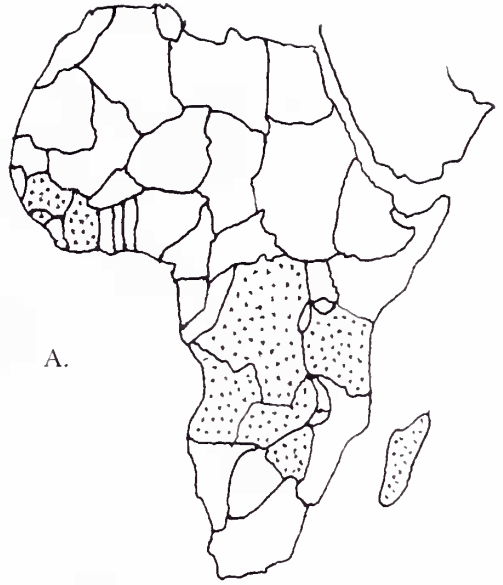
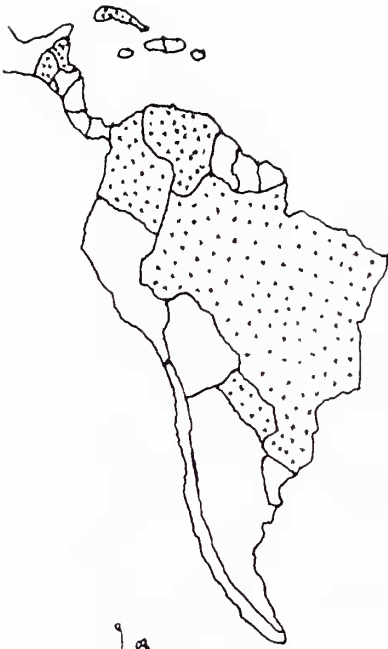
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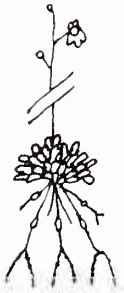
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A.



B.



C.



D.



E.

KEY:

- A. Distribution — shaded areas are those in which *Gentisea* can be found. Map may not be complete, particularly in Africa.
- B. generalized plant
- C. typical trap
- D. cross section of "arm"
- E. generalized flower